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An Inaugural Essay

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Indigestion,

For the degree of Doctor of Medicine

In the

University of Pennsylvania,

By

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of

Charleston South Carolina.

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When we consider the host of diseases by which man is beset, and (comparatively speaking) the limited means we possess of encountering them, we cannot but be astonished, that he so often reaches the term of years, allotted for his sojourn in this mortal world. To doubt the ability of the science of medicine however, in many cases to overcome disease, and thereby increase the probability of his reaching that term, would be worse than scepticism; and it cannot fail, to be a source of satisfaction to the mind of the philanthropist, that we have seen this host of diseases, gradually recede before the steady advance of our science; and with talent and industry such as are now engaged in its pursuit, what may we not hope to see accomplished, in the course of a few years more.

The institution of a comparison between the mortality of disease now, and what it was even so late as 50 years ago, will be sufficient to shew, the rapid advance towards perfection which the science of medicine has made & with such an object as it has in view, (viz) (the alleviation of human misery) it must continue to advance so long as this perfec=tion is unattained.

The disease which I have undertaken to treat of as the subject of the present Thesis, is one that has engaged the atten=tion of men of learning and Experience, and has been, the subject of many able dissertac=tions. Under such circumstances, it would be vanity in me who have had no instruc=tion in the school of Experience, to attempt any thing new. I shall therefore be con=tent if it be found, that I have selected

as my authority, men, who have devoted their time and talents to, and are universally acknowledged, as standard on the subject.

It is necessary before we can have any correct views concerning Indigestion and the diseases consequent thereon, that we should thoroughly understand the digestive process. I propose therefore, in the compilation of these pages, to commence by giving, a cursory view of that process, and then proceed to speak of Indigestion, as a disease. Digestion in Physiology is defined to be, that change the food undergoes in the stomach, by which it is converted into Chyme. Its immediate object, is the formation of Chyle, a matter destined to supply, the continual waste ~~in the animal~~ in the animal economy. I conceive it foreign to my purpose, to

enter a minute detail, of the anatomy of the different parts concerned in the digestive process. I shall therefore in treating of digestion, merely advert, to the changes the food undergoes while in the stomach. The actions which by their union constitute digestion, are several. The food is first recieved into the mouth there to be masticated, and impregnated with saliva. From thence it is propelled into the stomach, through the oesophagus, by the act of deglutition, there to be converted into chyme, by the action of the gastric juice. By the muscular contractions of the stomach, this mass is then forced into the duodenum, where it recieves the pancreatic juice and bile, and is then fit to be acted upon, by the lacteals. That the juice secreted by the stomach is not

only capable of reducing food taken into that organ to chyme, but also of acting upon inanimate animal matter without the body, has been clearly proved, by the experiments of Spallanzani and others. These experiments seem to put it beyond a doubt, that it is through the agency of this, (the gastric juice) that the contents of the stomach are fitted, to pass into the duodenum, there to undergo other changes, preparatory to their being taken up by the lacteals. And such is the power of this fluid, that, (according to Mr Hunter) it is only through the agency of the vital principle, that the stomach itself is enabled to resist its influence — for no sooner is it deprived of that principle, than it, like all other inanimate animal matter, becomes in-

=capable of withstanding its solvent power, and is corroded by it. That this is the case Mr Hunter had an opportunity of seeing demonstrated, not only in the inferior orders of animals but in man himself. In a man who was accidentally killed im=mediately after eating a full meal, he found, that a portion of the stomach was corroded, while the food he had just taken, remained wholly unchanged. It appears from experiments made by Wilson Philip, that the stomach is only acted upon, when there has been an unusually large sup==ply of the gastric juice, as where an uncommonly large meal has been made, immediately before death — and hence, in protracted cases of disease, where that organ has been long emptied of its contents, and there is only a

small secretion of this fluid, and that of so unhealthy a nature, as to be incompe=tent to the solution of ever so small a quantity of the most digestible matter if taken into it, we never find that its structure is affected. The different por=tions of the stomach, have been found by Mr. Philip, to possess the digestive power, in different degrees of perfection. On exami=ning the stomachs of numerous Rab=bits killed, with the digestive process at different stages of advancement, he found, that that portion of food, in contact with the surface of the stomach, was uniformly in a more advanced stage, than that which was more remote from it. Indeed this was so strikingly manifest, that unless the animal had fasted for a very long time, there

was a distinct line of demarkation be=
=tween the two portions. It appears also
from experiments made by the same gen
=tleman, that this layer of food, in con=
=tact with the surface of the stomach,
is at different stages of digestion, at differ
=ent portions of the surface. It is farther
advanced in the middle of the great
curvature, than either in the large end,
or the small curvature. Experiments have
not as yet proved, whether the food is ever
sufficiently digested in the small cur
=vature, to be sent to the pylorus, with=
=out passing through the large curva=
=ture. The food in the pyloric portion,
is found to be in a much more uni=
=form state of digestion, than that in
cardiac. So much so indeed, that the
line of demarkation becomes very

indistinct, and the nearer we approach to the orifice, the more does this line dis= =appear, untill finally we see nothing but a homogeneous mass, fit to be recie= ved into the duodenum. It appears then from what has been seen, that in pro= =portion as this layer of food in con= =tact with the surface of the stomach becomes digested, it is moved by the muscular action of this organ along its great curvature, there to undergo a still farther process, and to make room for the portion next in order.
Thus are the contents of the stomach successively made to undergo, the action of the gastric juice, and are then pro= =pelled to the pylorus, to be passed through it into the duodenum, there those farther changes which fit it for

chylification.

Having now as was proposed, traced the different steps of the healthy digestive process, we are the better prepared fully to understand, the operation of those causes which tend to disturb it, and this leads us in the first place to enquire, into the causes of Indigestion. It is evident from what has been said of the process of digestion, of the manner in which the food is, by the muscular contractions of the stomach propelled through its different parts, and of the agency of the gastric juice in the proper fulfilment of this process, that any thing which tends by its influence on the stomach, directly or indirectly to affect the healthy action of either the nervous or muscular power of that organ, must be ranked

among the causes of indigestion. In the nervous system of the human body, we discover two grand divisions. The one including those nerves which proceed directly from the brain and spinal marrow, and transmit sensa=tion to the brain, and nervous influence to the voluntary muscles. The other, those which regulate the functions of the various organs, as those of the stomach, liver, heart &c, are called ganglionic, and proceed from the great sympathetic. That the nerves of this former class are incapable of conveying any other sensation than that allotted to each particular one, we may assure our=selves by observing, that the auditory nerve is incapable of conveying taste, the optic sound, or the gustatory sight &c. In like manner, the nerves included in the second division are, in a state of health, incapa=

=ble of transmitting sensations, and it is not until they become diseased, that we are con=
=scious of their existence, as a part of our system. Johnson in his work on the mor=
=bid sensibility of the stomach and bow=
=els says, "the stomach is as sensible to the stimulus of food as the retina is to light, but we feel nothing of the impression. Let any one attentively observe when he eats plain food, or swallows plain drink. He feels both of these in his mouth; but the moment that either of them passes down the oesophagus, he is quite uncon=
=scious of its presence in the stomach. It is so with all the internal organs. The lungs feel the air, but we are uncon=
=scious of its presence in the air cells; the heart feels the stimulus of blood, with=
=out our knowledge and so of all the other

organs, while the intellectual system is quite unconscious of all these sensibilities. But says Dr J– let us go a step farther. Swallow a tea-spoon-ful of tincture of capsicum, or a wine-glass-ful of brandy, and then we feel not only a burning sensation in the mouth and throat, but a certain degree of the same sensation in the stomach. Simple as this experiment may appear, and unimpor=tant any conclusion thence resulting, it nevertheless unfolds one of the most fun=damental views in pathology, and one of the most useful precepts in the art of pre=serving health. The moment we call forth conscious sensation in the stomach, whe=ther that be of a pleasurable or painful kind, we offer violence to that organ, how=ever slight may be the degree. Let us view the matter closer. We take an abste=

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=mious meal of plain food, without any stimu=
=lating drink. Is there any conscious sensa=
=tion produced thereby in the stomach? I
say no. We feel a pleasurable sensation
throughout the whole frame, especially if we
have fasted for some time previously, but
no distinct sensation in the stomach.
"There is not — there ought not to be, any con=
=scious sensibility excited in this organ
by the presence of food or drink, in a state
of health; so true is this observation, that
to feel we have a stomach is no good
sign." It is evident according to the above
view of the subject, how slight may be
the causes which produce indigestion,
and how careful we should be to guard
against them. Only take any substance
into the stomach which will irritate its
nerves, and we vitiate its secretion, and

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as Dr Johnson says, become conscious we have a stomach, which consciousness as=
=sures us that disease exists in it.
Most writers agree in dividing the causes of this disease into two kinds. The first or remote, which act either by affecting the secretory power of the stomach and thereby preventing the pro=
=per chemical change from taking place in the food, or by debilitating its muscular power, so that although the food as far as it has been brought in contact with the surface is properly digested, yet on account of this muscular debility, the different portions are not made successively to pass through those parts which it is necessary they should, in order to become fitted for their ultimate destination, nor are they regularly discharged through the pylo=
=rus; and the second or proximate, which

is debility, induced by this want of tone in the muscular fibres. Dr Caldwell in his notes on Cullen's practice of medicine says, that in=
=digestion cannot be regarded as the imme=
=diate result of debility in the muscular fibres of the stomach, in as much as di=
=gestion is not a muscular process; but it has been proved by the experiments of Mr Philip, that when the muscular con=
=tractions of the stomach were not thor=
=oughly performed indigestion was the invariable result. Indeed this would ap=
=pear to be the case, simply from attending to the phenomenon of digestion. We have seen from the description of this, that it is necessary for the digestion of the food that it be brought in contact with the different portions of the surface of the stomach. For this to take place it is evi=

=dently necessary, that the muscular action of that organ be entire. Hence I think we are fully warranted with Dr Cullen in ad=
=ducing muscular debility as a proxi=
=mate cause of indigestion, though as he observes, it is certainly not the only one We next proceed to point out those cau=
=ses of indigestion, which by their action on either of the above mentioned func=
=tions of the stomach, tend to induce that state of atony we have said is to be considered as the proximate; and which are to be considered as the re=
=mote causes of the disease.

These according to Dr Cullens division, are of two sorts. First, those which act di=
=rectly and immediately on the stomach, such as 1st Tea, Coffee, Tobacco, Spirituous liquors, opium, Bitters, Aromatics, Sutries

and ascescants. Second large and repeated draughts of warm water or other watery li=
=quids. Third frequent surfeits immoderate=
=ly distending the stomach. Fourth fre=
=quent vomiting, whether arising spontan=
=eously or excited artificially. Fifth con=
=stant rejection of the saliva. And secon=
=ly, those which act upon the whole body or on particular parts of it and in con=
=sequence of whose action, the stomach is chiefly affected. Such are first, a life of in=
=dolent and sedentary habits. Second, a mind harrassed by disorderly passions of any kind. Third, hard study or close application to business continued for a length of time. Fourth, excessive grati=
=fication of the venereal appetite. Sixth being much exposed to damp and cold air without exercise. The causes enumer=

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=cated under the second division, may evident=
=ly affect other parts than the stomach;
but as this organ is always found either
primarily affected, or sympathizing with
the affected parts, our practice should be
directed towards it, particularly when we
find that upon the disease being con=
=quered there, it generally becomes more
tractable in the other parts affected.
"Having now enumerated those causes
which induce indigestion either by af=
=fecting the stomach primarily by their
action immediately on it, or secondari=
=ly by producing disease in other with
which this organ sympathizes, we are
now prepared to speak of their effects,
or the symptoms induced by them, and
in doing this I propose following the
divisions laid down by Mr Philip in

his treatise on indigestion; and I am led to do this because his divisions lead to a material difference in the practice, necessary to be instituted for the cure of this disease. The disease of which we are now treating, is perhaps, one of the most complicated in the whole catalogue of practice. We find it commencing with symptoms so trifling in their nature, as not to attract the attention of even the patient himself, and frequently to elude the suspicion of the most experienced practitioner; and unless checked by the appropriate remedies, we see it gradually but steadily advancing, until finally it completely undermines the strength of the whole system, and becomes as we have said, at once one of the most complicated and difficult of

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the diseases, to be overcome by the skill of the physician; one it is only by long and unremitted attention in the treatment of it that he is at length gratified, by his patients return to health. Nor is the com=plicated nature of this disease to be wondered at when we reflect, that it has for its seat an organ whose sym=pathies (and consequently whose liabili=ty to disease) are more extensive, than any other in the whole system. The symptoms of indigestion then are to be divided into three stages, each of which demands particular attention as we must vary our treatment according as we find it pass from one to the other. It commences as I have before remarked so slightly, that the patient himself is not aware of any departure from

his usual good health, and it is not un=
=till the symptoms have made consider=
=able advances that he is induced to ap
=ply for relief.
In the commencement of the disease
there is considerable flatulence & disten
=tion of the stomach. The patient finds
upon rising from table, that although
he has eaten much less than he was for
=merly in the habit of doing, yet there
is great uneasiness in the epigastric
region, with the peculiar feel of disten
=tion. His stomach is acid, and he is
troubled with oily eructations, which leave the
sensation of scalding in the throat.
This state of things may continue for
some time without his paying much
attention to them; he may even enjoy
tolerable health while under the influ=

=ence of these symptoms, and may by proper attention to his diet, eating sparingly and only of such substances as are easy of digestion, restore the tone of his stomach without undergoing medical discipline. Generally however, either from the greater degree of obstinacy attending the case, or from a want of proper attention to the quantity and quality of food taken into the stomach, these symptoms are kept up and, as a consequence the other portions of the alimentary canal are found to become implicated. The bowels become costive, the mouth sticky with a bitter=ish taste, and the tongue furred, particularly in the morning. These symptoms may, in the generality of cases be temporarily removed by some gentle laxative. In consequence however of the

want of due attention to the quantity and quality of the ingesta, they again recur, attended now with some failure of strength, which induces the patient to turn his attention seriously to his state of health. He finds upon rising in the morning, that his sleep has been by no means a refreshing one, and that he is unequal to the fatigues of the day. The mind as well as the body now becomes involved, and the patient often finds it impos= =sible to fix his attention on any ob= =ject. As may naturally be supposed, this diseased state of the stomach can= =not long exist, without other organs sympathizing in its distress. Hence we find the functions of the liver disordered, and its secretion is either

sparingly supplied, or else it is poured out in too lavish a manner. This state of things is pointed out, by the appearance of the alvine discharges. They either con= =sist principally of uncombined bile, or they are unnaturally light colour =ed denoting its almost total absence; generally however they are preternatu= =rally dark, and sometimes almost black. We sometimes find when there is a superabundant secretion from the liver, that the bile in consequence of the antiperistaltic motion of the duodenum, is thrown into the sto= =mach, and hence we have nau= =sea, head ach, and bilious vomi= =ting. There can be no doubt, that the difference in the food taken makes some change in the colour of the

feces. This I have myself so often seen exemplified as to render it with me a matter of certainty; but that the bile has this tendency even to a much greater degree, I think is exquisitely certaine; nor do I think that the change made by the one, can ever be mistaken for that made by the other. As the disease advances we find other parts sympathizing with the disordered state of the stomach, and hence, we see the appearance of the urine materially changed from the healthy standard. Instead of being copious and pellucid, we find it scanty and high coloured. It appears from observations made by Mr Philip, that when there is a prevalence of acidity in the stomach, the skin is

much less active than in an opposite state of this organ, and hence this acidity not passing off by the perspiration, we find a considerable deposite of it in the urine in the form of lithic acid. That when there is a predominance of alkali in the stomach the skin is unusually active, the urine becomes turbid, and deposites a white sediment which by analysis, is found to be a phosphate. Either of the above states of the urine may be found in indigestion but more frequently the former, in as much as an acid state of the stomach, is more usually met with in this disease. There is a remarkable sympathy existing, between the bowels and kidnies, which is well wor-

-thy of strict attention as it forms a prominent feature in the treatment of other diseases, than the one of which we are now treating. It is, that we frequently find the urine scanty and high coloured, when the bowels are costive; and that when even the most powerful diuretics fail in producing the desired effect, the simple administration of some meto aperient medicine, will pro-
-duce a copious flow. Upon the change in appearance of the alvine discharges, we find the stomach be-
-coming considerably more disor-
-dered. The smallest quantity of food, creates an immature sen-
-sation of distention. The bowels are very irregular, being sometimes

unnaturally loose, and at other times requiring cathartic medicines to move them. The matter discharged is very often watery, mixed with mucus and sometimes containing blood, and we find that cathartic medicines do not as easily effect a discharge as they formerly did. As the disease proceeds, owing to the morbid contents of the alimentary canal, the patient complains of increasing weakness, pains in the stomach and lower part of the bowels, and a sensation of burning in the stomach and bowels which it is difficult to get rid of. As it progresses, we find other parts sympathizing with the primae viae "These sympathetic affections, must of course be different in different cases. The digestive organs now become unequal to the requisite supply of nourishment, and hence

we find the body gradually becomes weak and emaciated, and the patient is rendered unable to attend to his daily avocations. Mr Philip insists strenuously on the differ=ence (and it appears to be by no means a useless one) between debility and depression of strength. In the former, the vigor of the vital powers is impaired, in the latter, their action is only impeded. It is evi=dent that one of these states of the sys=tem mistaken for the other, would lead to serious mischiefs in practice. Having now enumerated the most striking symp=toms incident to the first stage of indi=gestion, we proceed according according to the division lance down, to speak of the second.

The most prominent of these is a per=manent pain on pressure, just below

the end of the sternum. It is extremely cir=
=cumscribed, and never exists for any length
of time without the pulse becoming
hard, and it is this hardness of the
pulse, that admonishes us to change
our mode of treatment. There are others
incident to this stage of the disease
which would induce us to believe, that
the simple irritation of the first stage,
had passed on to inflammation. Such as
an increase of thirst, particular sweats in
the morning, inability of motion &c, but
the principal indication is the hard
pulse, and it is to this we are to accom
=modate, the change in our treatment.
"The symptoms of the third stage of indiges
=tion, are such as arise from organic af=
=fections. To enter into a detail of these
would lead us far beyond the limits we

are here necessarily confined to, and likewise involve us in the consideration of a large portion of the diseases to which the human race is subject. Suffice it here to say, that these organic affections though at first only symptoms of the advanced stage of indigestion, yet when suffered to progress unattended to, become themselves diseases, the favourable termination of which is frequently extremely dubious. This fact has been happily compared, to the support which the branches of a tree receive from the trunk. "Cut down a tree before its roots have penetrated deeply into the soil, and you destroy the branches also But let these roots take a firm and extensive hold; and we see them shooting out scions which in their turn strike their radicles into the ground, and ac=

=quire for themselves an independent vitae=ity." The knowledge of this fact should therefore strongly impress us, with the necessity of carefully watching those parts which are likely in the course of the original dis=ease to become sympathetically affected, that we may not have to treat as a disease, that which by proper attention, might have been prevented from becoming any thing more than a symptom.

In the treatment of this disease as in all others, we must be guided wholly by the symptoms; and hence we have it divided into that appropriate to the first, second, and third stages. The pro=gress of the disease from one stage to ano=ther should be carefully watched, as it is only by this attention that we can inform ourselves, we are not treating one stage

of it with those remedies, which are peculiar-ly adapted to another. When called to a patient labouring under the earliest symptoms of indigestion (which have been enumerated) we may frequently by proper attention to diet and exercise, restore him to health without subjecting him to a strict medical discipline. The diet should be such, as will neither offend the stomach by its quantity or quality. It should be eaten slowly so that it may be thorough-ly masticated and impregnated with saliva; and that a greater quantity than the gastric juice then in the stomach can act upon, may not be taken. The due performance of the process of mastication, is of the utmost consequence to the proper digestion of the food. A weak stomach will find it difficult to digest ever so

small a portion of food, provided it is not thoroughly masticated. Particular attention should also be paid, to the quantity of food taken. The sensation of hunger is created by the impression of the gastric juice on the stomach, hence this sensation can never be felt except there be a quantity of that fluid present. This sensation then should ever be particularly attended to by the dyspeptic, since whatever is taken into the stomach during its absence, (or which is the same thing during the absence of the gastric juice) must remain there an undigested mass, irritating that organ and giving rise to all those evils we have already enumerated. It has been remarked, that "the stomach when unemployed is always doing mis

=chief," and from this observation we ob=
=tain a rule in regard to the eating of
the dyspeptic, (viz) that he should eat
frequently and a little at a time
Concerning the articles that are easiest of di=
=gestion it may be sufficient to observe,
that all game comes under this head, that
white poultry are easy of digestion, that fat
is offensive to the stomach, and that the
most simple manner in which the food
is prepared is the state in which it is
most easily acted upon by the digestive
apparatus. Generally speaking milk will
be found the most appropriate diet for
the dyspeptic invalid, and to be effec=
=tual it must be exclusively allowed.
Where milk disagrees with the stomach,
the best substitute is chocolate divested
of its oily parts by boiling. Drink is to

be moderately taken at meals, neither abstaining totally from it, (as has been recommended) nor yet indulging in it to excess. Particular attention must be paid by the dyspeptic to the exercise, both of his mind and body. We have seen from the experiments of Mr Philip, that in the course of the healthy diges=
=tive process, no admixture takes place between the food recently taken into the stomach, and that which has already been acted upon by the gastric juice; and hence a rule, that exercise im=
=mediately after eating is injurious, in as much as it causes this mixture to take place. Riding on horseback is the exercise which is perhaps upon the whole best suited, to a dyspeptic pa=
=tient. It should however not be taken

for an hour or two after eating, and should never be carried so far as to fatigue. The same rule holds as regards the exercise of the mind, (viz) it should never be fa=
=tigued. Light reading such as is calcu=
=lated to amuse is useful, but any thing farther is injurious.

"The first indication in the medical treatment of this disease is the relief of the stomach and bowels, which are almost uniformly first loaded. To empty the stomach an emetic of Ipecac is to be given, provided there is no phlogosis of that organ. Mr Philip thinks the repetition of emetics is injuri=
=ous as it creates a morbid excitement, and inverts the natural action of the stomach and duodenum. Next to an emetic we are to give some gentle ape=

=vient, avoiding in this stage of the disease the neutral salts. As a laxative Rhubarb in the following formula as recommended by Dr Chapman, has been found by him very useful.

Forty pills are to be made of this & 3 given at a dose

℞ Rhubarb ---- ʒjj
Common Syrup -- ʒj
Oil of Caraway Seeds gtts ii

Where there is epigastric uneasiness Dr C. recommends the following,

A wine glassful of this is to be given 2 or 3 times a day.

℞ Senna ---- ʒjv
Gentian -- ʒjj
Boiling water -- Oj

Mr Philip thinks that where the emetic and laxative fail in producing the desired end we should resort to gentle stimulants, with a view of correcting the unhealthy secretions. This practice however must obviously prove injurious, where phlogosis

of the stomach exists. Where an acid state of the stomach exists, it is to be corrected by absorbent medicines, as magnesia, lime water, and particularly the lye made by pouring boiling water on hiccory ashes. The stomach being prepared by the above mentioned remedies we are next to resort to tonics, which are obtained either from the vegetable or mineral kingdoms. Among the vegetable are the quassia, gentian, columbo, commomile &c. The mineral tonics rank very high, particularly the preparations of Iron, one of these Dr Chapman gives the preference to the Sulphas Ferri. It may be given in the following formula,

This is to be divided into XXX pills. One to be taken morning, noon, & night.

℞ Sul Ferri ------ ʒj
Extract Gentian q s

There are many other tonics recommen=
=ded to give tone to the stomach during
the first stage of indigestion. I conceive
however that I have said enough
concerning them, and shall only far=
=ther remark in regard to tonics in
general, that their use is to be abstain=
=ed from, where any of the symptoms
of phlogosis of the stomach exist.
I now proceed to speak of the treatment
appropriate to the second stage of the
disease, and which may be done in
very few words. It is evident from
what has been said of the symptoms
in this stage, that the stimulating plan
adopted in the close of the last stage,
would prove highly injurious. We
must observe however that although
this plan would prove hurtful, yet the

strength of the patient must be suppor=
=tee, and hence the most powerful
antiphlogistics are seldom called for.
This however is to be determined solely
by the urgency of the symptoms, re=
=membering that the strength of the
patient will not rally as easily, or ef=
=fectually, as it did in the early stages
of the disease. Leeching and blistering
the epigastrium, frequently not only
removes the pain, but ameliorates
all the other symptoms. Small and re=
=peated doses of mercury in the form
of the blue pill, to correct the secretion
of the liver, are useful in this stage
The treatment of the
third stage of this disease would
as I observed when speaking of the
symptoms, lead me into a field far

too extensive for the necessary limits of this production. I shall therefore close it by insisting strenuously on the absolute necessity that exists in our practice of watching carefully these organic symptoms that we may apply our means of cure before they become themselves diseases which may eventually baffle our utmost skill.

Finis